

Maryland Historical Trust

Maryland Inventory of Historic Properties number: SM-506
Name: MD 244 over Poplar Hill Creek

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u>X</u>	Eligibility Not Recommended _____
Criteria: <u>A</u> <u>B</u> <u>X</u> C <u>D</u> Considerations: <u>A</u> <u>B</u> <u>C</u> <u>D</u> <u>E</u> <u>F</u> <u>G</u> <u>None</u>	
Comments: _____	

Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. SM-506

SHA Bridge No. 18024 Bridge name MD 244 over Poplar Hill Creek

LOCATION:

Street/Road name and number [facility carried] MD 244 (Beauvue Road)

City/town Chingville

Vicinity X

County St. Mary's

This bridge projects over: Road Railway Water X Land

Ownership: State X County Municipal Other

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes No X

National Register-listed district National Register-determined-eligible district

Locally-designated district Other

Name of district

BRIDGE TYPE:

Timber Bridge :

Beam Bridge Truss -Covered Trestle Timber-And-Concrete

Stone Arch Bridge

Metal Truss Bridge

Movable Bridge :

Swing

Vertical Lift

Bascule Single Leaf

Retractable

Bascule Multiple Leaf

Pontoon

Metal Girder X:

Rolled Girder X

Plate Girder

Rolled Girder Concrete Encased

Plate Girder Concrete Encased

Metal Suspension

Metal Arch

Metal Cantilever

Concrete :

Concrete Arch Concrete Slab Concrete Beam Rigid Frame

Other Type Name

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X

Describe Setting:

Bridge No. 18024 carries MD 244 (Beauvue Road) over Poplar Hill Creek in St. Mary's County. MD 244 runs east-west and Poplar Hill Creek flows north-south. The bridge is located in the vicinity of Chingville and is surrounded by a wooded area.

Describe Superstructure and Substructure:

Bridge No. 18024 is a single-span, 2-lane, metal girder bridge. The bridge was built in 1938, and rehabilitated in 1996. The rehabilitation included the construction of new concrete piles at each abutment. The piles support new metal caps which transfer the weight of the superstructure to the piles. The structure is 21 feet long and has a clear roadway width of 26 feet; there are no sidewalks. The out-to-out width is 30.5 feet. The superstructure consists of seven (7) rolled girders which support a reinforced concrete deck and a concrete and wood balustrade. Each railing consists of two concrete end blocks and two concrete posts connected by 2 inch by 8 inch wood railings. The end blocks are Art Deco-influenced with a projecting central section and decorative sloping sides. The girders are 1.5 feet x 9 inches and are spaced 4.25 feet apart. The roadway is carried on the girders. The concrete deck is 7 inches thick and it has a 1.5 inch bituminous wearing surface. The substructure consists of two (2) timber abutments and timber wing walls. The bridge is not posted, and has a sufficiency rating of 82.1.

According to the 1996 inspection report, this structure was in satisfactory condition. The deck has a new overlay of asphalt with no visible cracks or defects. The girders have light to moderate rusting and spots of efflorescence. The timber abutments have areas of soft wood with cracks and splits. The new piles are supporting the bridge, while the timber abutments are holding the fill for the approach roadways. The timber wing walls are rotting and decaying with soft wood and fungus.

Discuss Major Alterations:

New concrete piles were added to the bridge in 1996. Steel beams top the piles and support the bridge. The wood railing connecting the concrete posts was replaced.

HISTORY:

WHEN was the bridge built: 1938

This date is: Actual X Estimated _____

Source of date: Plaque _____ Design plans _____ County bridge files/inspection form

Other (specify): State Highway Administration bridge files/inspection form

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

The bridge was altered to correct functional or structural deficiencies.

Was this bridge built as part of an organized bridge-building campaign?

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events _____ B- Person _____
C- Engineering/architectural character X

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of metal girder construction. The structure has a high degree of integrity and retains such character-defining elements of the type as rolled girders and timber abutments.

Was the bridge constructed in response to significant events in Maryland or local history?

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost \$2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic. The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900" by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge is a potentially significant example of a metal girder bridge, possessing a high degree of integrity.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including steel abutments and timber abutments, however some deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is a significant example of the work of the State Roads Commission in the 1930s.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files _____ SHA inspection/bridge files X
Other (list):

Gunnarson, Robert

1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario*. Greenberg Publishing Co., Sykesville, Maryland.

Johnson, Arthur Newhall

1899 *The Present Condition of Maryland Highways. In Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

Tyrrell, Henry G.

1911 *History of Bridge Engineering*. Published by author, Chicago.

SURVEYOR:

Date bridge recorded 2/25/97

Name of surveyor Caroline Hall/Tim Tamburrino

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

Phone number (410) 296-1685 FAX number (410) 296-1670

Maryland Historic Highway Bridges

Bridge Type METAL GIRDER

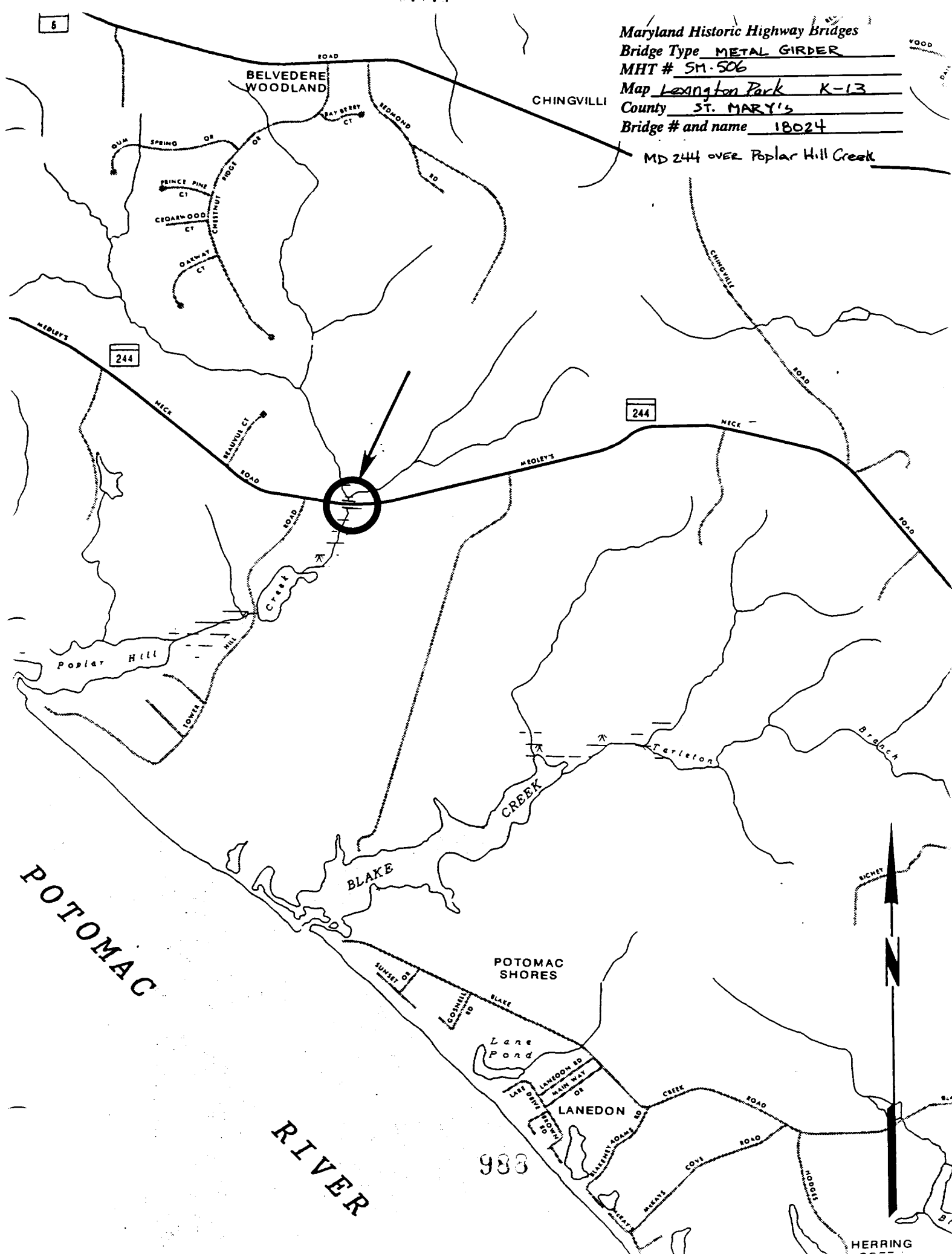
MHT # SM-506

Map Lexington Park K-13

County ST. MARY'S

Bridge # and name 18024

MD 244 OVER Poplar Hill Creek





1. 5m-506
2. MD 244 over Poplar Hill Creek
3. St. Mary's Co. MD
4. Tim Tamburino
5. 3-97
6. MD 511A0
7. West approach
8. 1 of 6



1. 5m- 506
2. MD 244 over Poplar Hill Creek
3. St. Mary's Co. MD
4. Tim Tamburine
- 5 3-97
6. MD 54R
7. East approach
8. 2nd 6



1. 5M - 506

2. MO 244 over Poplar Hill Creek

3. St. Mary's Co. MO

4. Tim Tamburine

5. 3-97

6. MO SHPO

7. North elevation

8. 3 of 6



1. SM-506
2. MD 244 over Poplar Hill Creek
3. St. Mary's Co. MD
4. Tim Tumbone
5. 3-97
6. MD SRP0
7. Detail of West abutment
8. 1 of 6



1 SM-506

2 MD 244 over Rpt. Hill Creek

3. St Mary's Co. MD

4. Tim Tamburino

5. 3-97

6. MD SHPO

7 South elevation

8. 5 of 6



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1. SM-506
2. MD 344 over Poplar Hill Creek
3. St Marks Co. MD
4. Tim Tambone
5. 3-97
6. MD 5480
7. Detail of north parapet
8. 6.4.6